

PARATRICHOGRAMMA GIRAULT, NEW RECORD GENUS FROM CHINA WITH DESCRIPTION OF A NEW SPECIES (HYMENOPTERA, TRICHOGRAMMAFIDAE) FROM CHINA

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Abstract In this paper, the genus *Paratrichogramma* Girault is recorded for the first time from China, and a new species, *Paratrichogramma tarimica* is described. The type materials are deposited in Life Science and Technology College, Xinjiang University, Urumqi, China.

Key words Hymenoptera, Trichogrammatidae, *Paratrichogramma*, new species, China.

The genus *Paratrichogramma* belongs to Trichogrammatinae, Trichogrammatini according to its male genitalia, (Yousuf and Shafee, 1987), which is closely related to *Trichogramma* Westwood in possessing 1-segmented club in female, but differs from *Trichogramma* in having 1-segmented funicle in female, fore wings lacking sigmoid venation and m-cu.

Paratrichogramma was erected by Girault (1912) according to the type species *P. cinderella* from Queensland, at the same time he described another new species. Douth (1973) published 2 new species from South Africa and California; Viggiani (1976) described a new species from Australia; Hayat etc. (1980), Yousuf and Shafee (1987, 1991) described 3 new species from India. Up to now, there are 8 known species in the world, of which, 3 species from Oriental Region, 1 from Nearctic Region, 1 from Afrotropical and 3 from Australian Region. Except 2 species were reported parasiting the eggs of Noctuidae and Gracilariidae, the biological characters and hosts of the remains are unknown.

A study of material collected from Xinjiang has revealed 1 new species, and this genus also is the first record in China and Palearctic Region. The specimens studied were collected by sweeping, therefore its biological data is unavailable.

The descriptions are based on specimens slide-mounted in Canadian balsam. All the measurements were taken from slide-mounted specimens at 100× or 200× of Zeiss compound microscope and eye-piece reticle. Body length is measured from the anterior margin of the head to the apex of abdomen, excluding the exerted part of the ovipositor. Except the data of body length is true size, the remains are all relative ones.

Terminology for morphological features mainly

followed Douth and Viggiani (1968).

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Paratrichogramma Girault

Paratrichogramma Girault, 1912. *Bull. Wisc. Nat. Hist. Soc.*, 10: 82.

Paratrichogramma Girault, 1968. Douth & Viggiani, *Proc. Calif. Acad. Sci.*, 35 (20): 497.

Paratrichogramma Girault, Douth, 1973. *Pan-Oceanic Ent.*, 49: 192-196.

Paratrichogramma Girault: Yousuf and Shafee, 1987. *Indian J. Syst. Ent.*, 4 (2): 83-85.

Type species: *Paratrichogramma cinderella* Girault

Type Locality: Australia (Queensland).

Distribution. China, India, South Africa, Australia, U. S. A.

Diagnosis. Antenna dimorphic, the female's 5-segmented, with formula 11111; male 6-segmented, with formula 11121, the second segmented funicle unusual bottle-shaped forming a neck which joins club; forewing with short marginal vein, marginal vein failing touch the anterior board of forewing, discal cilia sparse; male genitalia with digiti and claspers.

Paratrichogramma tarimica sp. nov. (Figs. 1-4)

Female. Length 0.58 mm. body yellow-brown, except funicle and club pale yellow, legs and vein pale yellow brown, compound eyes and ocelli brown; wings hyaline, forewings with a very light infuscated area under veins.

Head slightly wider than long (39: 33). Mandible 3 teeth with 2 sharp and the third short and blunt; palp 1.5 times longer than wide with pear-shaped base. Antennae (Fig. 1), scape spindle, with 3.4 times longer than wide (17: 5); pedicel pear-shaped, 2 times longer than wide (8: 4), about 0.47 length of scape; funicle 1-segmented, 2 times longer than its width (8: 4), with stalk-like

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peduncle attachment to single club; club 3 times longer than wide (18: 6).

Thorax much shorter than abdomen (30: 51), about 0.6 length of the latter. Forewing (Fig. 3) 1.8 times longer than wide (77: 42); vein short and broad with venation ratios as follows: submarginal: premarginal: marginal= 10: 7: 8; marginal vein falling to touch the anterior board of forewing, 2.67 times longer than wide (8: 3); disc apically with few setae, scattered; marginal fringe short, about one fortieth of wing width. Hind wing 10.0 times longer than wide (72: 7) with 2 rows setae; marginal fringe long, about 1.57 times longer than hind wing's width (11: 7). Legs short and small, the basitarsi shortest and the third tarsi longest; the ratios of each segment as Table 1.

Table 1.

	Fore leg	Middle leg	Hind leg
Femur	22	26	27
Tibia	22	21	35
Tarsus	26	31	29

Ovipositor short, arising from half apex of

abdomen, about 0.46 length of abdomen (30: 65), shorter than hind tibia (30: 35), not exerted.

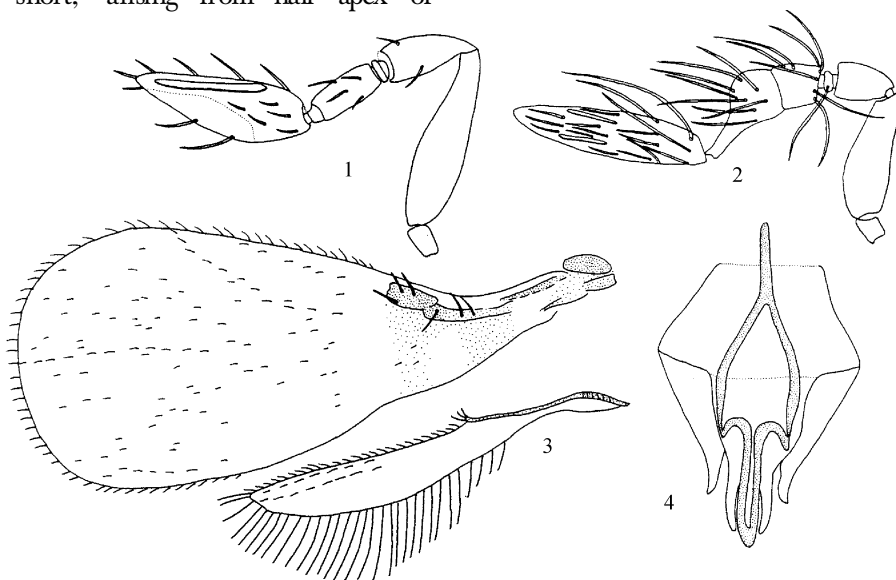
Male. Length 0.69 mm. The main characters similar to female. Antennae (Fig. 2) with peculiar bottle shaped second funicle, the first funicle much shorter than the second (3.5: 8.0). Male genitalia (Fig. 4) special, gonoforceps (GF) and chelate structure (CS) distinct and developed, a pair of apodemes (AAP) fused basally.

Holotype ♀, China, Xinjiang, Akesu (41°01' N, 80°2' E), 28 May 2001, coll. WU Wei. Paratypes: 1 ♀, same data as holotype; 1 ♀, China, Xinjiang, Qitai (44°12' N, 90°4' E), 25 June 2004, coll. HU Hong Ying; 1 ♂, China, Xinjiang, Hami, 1 July 2004, coll. HUANG Shuai; 1 ♂, China, Xinjiang, Shihezi, 19 July 2005, coll. HU Hong Ying.

Host: unknown.

Distribution. China (Xinjiang, Shihezi, Qitai, Hami, Akesu).

All the type materials are deposited in Life Science and Technology College, Xinjiang University, Urumqi, China.



Figs 1-4. *Paratrachogramma tarimica* sp. nov. 1. Female antennae. 2. Male antennae. 3. Fore wing. 4. Male genitalia.

Comments. This species is similar to *Paratrachogramma giraulti* Hayat et Shafee, but can be easily separated from the latter in the sparser discal cilia on the forewing, the shorter marginal fringe, and ovipositor much longer than middle tibia; male's 1st funicle much shorter than the 2nd funicle.

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中国新纪录属副赤眼蜂属及一新种记述 (膜翅目, 赤眼蜂科)

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摘 要 首次报道了副赤眼蜂属 *Paratrichogramma* Girault 在中国及古北区的分布, 并记述了采自新疆的 1 新种, 塔里木副赤眼蜂 *Paratrichogramma tarimica* sp. nov., 本种与 *Paratrichogramma giraulti* Hayat *et* Shuja 很相似, 但本种前翅翅面纤毛更稀少,

关键词 膜翅目, 赤眼蜂科, 副赤眼蜂属, 新种, 中国.

中图分类号 Q969. 54

缘毛极短, 产卵管明显长于中足胫节, 雄性触角第 1 索节远短于第 2 索节。模式标本保存在新疆大学生命科学与技术学院昆虫研究室。